

# Truman State University — Missouri S&T

## General Engineering Transfer Guide

Effective as of Fall 2020

Complete Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice.

### Group 1 - Core Requirements: All Majors Take All Courses

Engineering students take all Group 1 - Core Requirements and Group 2 - Major Requirements for major of choice. Math prerequisites: While they are not part of Missouri S&T engineering degree requirements, algebra and trigonometry skills are critical to success in calculus. To prepare for entry into calculus, students should follow math placement testing and advising recommendations at their college.

<u>Truman State University</u>			<u>Semester</u>	<u>Missouri S&amp;T</u>			
MATH 198	Analytic Geometry and Calculus I	5		MATH 1214	Calculus for Engineers I	4	
MATH 263	Analytic Geometry and Calculus II	5		MATH 1215	Calculus for Engineers II	4	
MATH 264	Analytic Geometry and Calculus III	3		MATH 2222	Calculus with Analytic Geometry III <small>Grade of C or better is required.</small>	4	
MATH 365	Ordinary Differential Equations	3		MATH 3304	Elementary Differential Equations	3	
PHYS 195	Physics I	5		PHYSICS 1135	Engineering Physics I	4	
PHYS 196	Physics II	5		PHYSICS 2135	Engineering Physics II	4	
CHEM 130	Chemical Principles I	4		CHEM 1310, 1319	General Chemistry I and Lab	5	
ENG 190	Writing as Critical Thinking	3		ENGLISH 1120	Exposition and Argumentation	3	
ECON 201 or ECON 200	Principles of Microeconomics or of Macroeconomics	Principles 3		ECON 1100 or ECON 1200	Principles of Microeconomics or Principles of Macroeconomics	3	
<b>Total Hours</b>			<b>36</b>	<b>Total Hours</b>			<b>34</b>

### Group 2 - Major Requirements: Take All Courses for Major of Choice

Engineering students take all Group 1 - Core Requirements (above) and Group 2 - Major Requirements for chosen major from list below. See course requirements on following pages.

**Aerospace Engineering**  
**Architectural Engineering**  
**Ceramic Engineering**  
**Chemical Engineering**  
**Chemical Engineering/Biochemistry Emphasis**  
**Civil Engineering**  
**Computer Engineering**  
**Electrical Engineering**

**Engineering Management**  
**Environmental Engineering**  
**Geological Engineering**  
**Mechanical Engineering**  
**Metallurgical Engineering**  
**Mining Engineering**  
**Nuclear Engineering**  
**Petroleum Engineering**

Engineering Major Requirements are detailed on the following pages.

**Free Electives:** Some programs allow Free Electives as indicated within each major. Free Electives should be selected in consultation with your advisor and may not include remedial/deficiency courses, algebra, trigonometry, pre-calculus, or extra credits in required courses.

**Humanities/Social Science (HSS) Electives:** HSS electives may include any history, economics, political science, sociology, psychology, philosophy, fine art, literature, or foreign language. Missouri S&T approved HSS courses are listed at [ugs.mst.edu](http://ugs.mst.edu). Your campus may have additional acceptable options. Consult with your advisor or email [transfer@mst.edu](mailto:transfer@mst.edu) with questions.

## Aerospace Engineering Group 2 Major Requirements

	<u>Truman State University</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	3
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	3
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3	CS 1971, 1981	3
PHYS 387	Statics	3	CIV ENG 2200	3
MATH 357 or STAT 290	Linear Algebra or Statistics	3	MATH 3108 or STAT 3115	3
	Literature Elective	3		3
	Ethics Elective	3		3
	<i>No free electives applied to the degree.</i>	0		0
	Group 2 Major Requirements	21		21
	Group 1 Core Requirements	36		34
	Total Hours	57		Total Hours* 55

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Aerospace Engineering degree.

## Architectural Engineering Group 2 Major Requirements

	<u>Truman State University</u>	<u>Semester</u>	<u>Missouri S&amp;T</u>	
HIST 112* (or HIST 104 or HIST 105)	World Civilizations since AD1300* (or US History I, 1607-1877 or US History II, 1877-present ) <small>*HISTORY 112 is preferred; 104 or 106 will also be accepted.</small>	3	HISTORY 1200* (or HISTORY 1300 or HISTORY 1310)	3
PHY 387	Statics	3	CIV ENG 2200	3
STAT 290	Statistics	3	STAT 3115	3
ENG 210 or COMM 170 or HSS Elective	Writing Across the Disciplines or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	3
NASC 140	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	3
	<i>No free electives applied to the degree.</i>	0		0
	Group 2 Major Requirements	16		15
	Group 1 Core Requirements	36		34
	Total Hours	52		Total Hours* 49

\*S&T advisor permission is required to transfer more than 69 credits toward the S&T Architectural Engineering degree.

## Ceramic Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
CHEM 329, 330	Organic Chemistry I and Lab	4	CHEM 2210	Organic Chemistry I (4) <small>(Not a specific requirement. Will satisfy the advanced chemistry elective requirement.)</small>	3
CHEM 131	Chemical Principles II	4	CHEM 1320, 1510*	General Chemistry II(3) and Qualitative Analysis*(2) <small>*CHEM 1510 is not a specific degree requirement, will transfer as general elective credit</small>	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics <small>(or any statistics course 3000-level or higher. Satisfies statistics elective requirement.)</small>	3
PHYS 250	Modern Physics I	3	PHYS 2311*	Modern Physics I* <small>PHYS 2311 will be substituted for PHYS 2305 for Ceramic Engineering majors.</small>	3
ENG 210 or COMM 170 or HSS Elective	Writing Across the Disciplines or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3	ENGLISH 1160 or SPMS 1185 or HSS Elective	Writing and Research or Public Speaking or Humanities/Social Science Elective: history, economics, political science, sociology, psychology, philosophy, fine art, literature, foreign language	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	26		Group 2 Major Requirements	24
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	62		Total Hours*	58

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Ceramic Engineering degree.

## Chemical Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210	Writing Across the Disciplines	3	ENGLISH 1160	Writing and Research	3
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
CHEM 131	Chemical Principles II	4	CHEM 1320, 1510*	General Chemistry II(3) and Qualitative Analysis*(2) <small>*CHEM 1510 is not a specific degree requirement, will transfer as general elective credit</small>	3
CHEM 329, 330	Organic Chemistry I (3) and Lab (1)	4	CHEM 2210, 2219	Organic Chemistry I (3) and Lab (1)	4
CHEM 331 or BIOL 200 or BIOL 204 or BIOL 304	Organic Chemistry II (3) or Cell Biology (4) or Introductory Microbiology (4) or General Microbiology (4)	8	CHEM 2220 or BIO SCI 2213, 2219 or BIO SCI 3313 or BIO SCI 3313, 3319	Organic Chemistry II (3) or Cell Biology (3) and Lab (1) or Microbiology (3) Microbiology (3) and Lab (2) or <small>(Will satisfy science elective requirement. Select up to 8 hours from these options.)</small>	8
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3	CS 1500 or CS 1971, 1981	Computational Problem Solving or Intro to Programming Method and Lab (C++)	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
COMM 170	Public Speaking	3	SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	33
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	70		Total Hours*	67

\*S&T advisor permission is required to transfer more than 69 credits toward the S&T Chemical Engineering degree.

## Chemical Engineering - Biochemical Engineering Emphasis Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210	Writing Across the Disciplines	3	ENGLISH 1160	Writing and Research	3
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
CHEM 131	Chemical Principles II	4	CHEM 1320, 1510*	General Chemistry II(3) and Qualitative Analysis*(2) <small>*CHEM 1510 is not a specific degree requirement, will transfer as general elective credit</small>	3
CHEM 329, 330 CHEM 331 or BIOL 200 or BIOL 204 or BIOL 304	Organic Chemistry I (3) and Lab (1) Organic Chemistry II (3) or Cell Biology (4) or Introductory Microbiology (4) or General Microbiology (4)	4 8	CHEM 2210, 2219 CHEM 2220 or BIO SCI 2213, 2219 or BIO SCI 3313 or BIO SCI 3313, 3319	Organic Chemistry I (3) and Lab (1) Organic Chemistry II (3) or Cell Biology (3) and Lab (1) or Microbiology (3) Microbiology (3) and Lab (2) or <small>(Will satisfy science elective requirement. Select up to 8 hours from these options.)</small>	4 8
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3	CS 1500 or CS 1971, 1981	Computational Problem Solving or Intro to Programming Method and Lab (C++)	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
COMM 170	Public Speaking	3	SP&MS 1185	Principles of Speech	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	34		Group 2 Major Requirements	33
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	70		Total Hours*	67

\*S&T advisor permission is required to transfer more than 71 credits toward the S&T Chemical/Biochemical Engineering degree.

## Civil Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
NASC 140	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics <small>(Will be substituted for STAT 3113.)</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	18
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	55		Total Hours*	52

\*S&T advisor permission is required to transfer more than 69 credits toward the S&T Civil Engineering degree.



## Engineering Management Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
PSYC 166	General Psychology	3	PSYCH 1101	General Psychology	3
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	3		Maximum Free Electives	3
	Group 2 Major Requirements	24		Group 2 Major Requirements	24
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	60		Total Hours*	58

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Engineering Management degree.

## Environmental Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 104 or HIST 105 or HIST 112	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200	American History to 1877 or American History since 1877 or Modern Western Civilization	3
NASC 140	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
CHEM 131	Chemical Principles II	4	CHEM 1320, 1510*	General Chemistry II(3) and Qualitative Analysis*(2) <small>*CHEM 1510 is not a specific degree requirement, will transfer as general elective credit</small>	3
BIOL 100	Biology	4	BIO SCI 1113	General Biology	4
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics (Will be substituted for STAT 3113.)	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	27		Group 2 Major Requirements	25
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	63		Total Hours*	59

\*S&T advisor permission is required to transfer more than 69 credits toward the S&T Environmental Engineering degree.

## Geological Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
NASC 140	Physical Geology	4	GEO ENG 1150 (GEOLOGY 1110)	Physical and Environmental Geology	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
BIOL 100 or CHEM 131 or CHEM 329	Biology (4) or Chemical Principles II (4) or Organic Chemistry I (3)	3-4	BIO SCI 1113 or CHEM 1320 or CHEM 2210	General Biology (4) or General Chemistry II (3) or Organic Chemistry I (4) or any 3-hour course in chemistry, geochemistry, or biology. Satisfies chemistry/geochemistry elective requirement.	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	22		Group 2 Major Requirements	21
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	58		Total Hours*	55

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Geological Engineering degree.

## Mechanical Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
CS 180 or CS 181	Foundations of Computer Science I (4) or Foundations of Computer Science II (3)	3	CS 1971, 1981	Intro to Programming Method and Lab (C++)	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
MATH 357 or STAT 290	Linear Algebra or Statistics	3	MATH 3108 or STAT 3115	Linear Algebra I or Engineering Statistics (Will satisfy the Advanced Math/Comp Sci elective requirement.)	3
	Literature Elective	3		Literature Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	12		Group 2 Major Requirements	21
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	48		Total Hours*	55

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mechanical Engineering degree.

## Metallurgical Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210 or COMM 170	Writing Across the Disciplines or Public Speaking	3	ENGLISH 1160 or SPMS 1185	Writing and Research or Principles of Speech	3
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics	3
CHEM 131	Chemical Principles II	4	CHEM 1320, 1510*	General Chemistry II(3) and Qualitative Analysis*(2) <small>*CHEM 1510 is not a specific degree requirement, will transfer as general elective credit</small>	3
CHEM 329 or PHYS 250	Organic Chemistry I or Modern Physics I	3	CHEM 2210 or PHYSICS 2311	Organic Chemistry I (4) or Modern Physics I (3) <small>Not specifically required for the degree but will satisfy Out-of-Department Technical Elective Requirement.</small>	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	5		Maximum Free Electives	5
	Group 2 Major Requirements	30		Group 2 Major Requirements	29
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	66		Total Hours*	63

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Metallurgical Engineering degree.

## Mining Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210	Writing Across the Disciplines	3	ENGLISH 1160	Writing and Research	3
HIST 104 or HIST 105 or HIST 112 or POL 161	US History I, 1607-1877 or US History II, 1877-present or World Civilization since AD1300 or American National Government	3	HISTORY 1300 or HISTORY 1310 or HISTORY 1200 or POL SCI 1200	American History to 1877 or American History since 1877 or Modern Western Civilization or American Government	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics	3
PHYS 387	Statics	3	CIV ENG 2200*	Engineering Mechanics-Statics	3
NASC 140	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	22		Group 2 Major Requirements	21
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	58		Total Hours*	55

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Mining Engineering degree.



## Nuclear Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210	Writing Across the Disciplines	3	ENGLISH 1160	Writing and Research	3
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 or	
HIST 105 or	US History II, 1877-present or	3	HISTORY 1310 or	American History since 1877 or	3
HIST 112 or	World Civilization since AD1300 or		HISTORY 1200 or	Modern Western Civilization or	
POL 161	American National Government		POL SCI 1200	American Government	
MATH 357	Linear Algebra	3	MATH 3108	Linear Algebra	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
STAT 290	Statistics	3	STAT 3115	Engineering Statistics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>See your advisor for course options.</i>	6		Maximum Free Electives	6
	Group 2 Major Requirements	30		Group 2 Major Requirements	30
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	66		Total Hours*	64

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Nuclear Engineering degree.

## Petroleum Engineering Group 2 Major Requirements

<u>Truman State University</u>		<u>Semester</u>	<u>Missouri S&amp;T</u>		
ENG 210	Writing Across the Disciplines	3	ENGLISH 1160	Writing and Research	3
HIST 104 or	US History I, 1607-1877 or		HISTORY 1300 or	American History to 1877 or	
HIST 105 or	US History II, 1877-present or	3	HISTORY 1310 or	American History since 1877 or	3
HIST 112 or	World Civilization since AD1300 or		HISTORY 1200 or	Modern Western Civilization or	
POL 161	American National Government		POL SCI 1200	American Government	
NASC 140	Physical Geology	4	GEOLOGY 1110 (GEO ENG 1150)	Physical and Environmental Geology	3
PHYS 387	Statics	3	CIV ENG 2200	Engineering Mechanics-Statics	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	Humanities/Social Science Elective	3		Humanities/Social Science Elective	3
	<i>No free electives applied to the degree.</i>	0		Maximum Free Electives	0
	Group 2 Major Requirements	19		Group 2 Major Requirements	18
	Group 1 Core Requirements	36		Group 1 Core Requirements	34
	Total Hours	55		Total Hours*	52

\*S&T advisor permission is required to transfer more than 68 credits toward the S&T Petroleum Engineering degree.